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EXAMINER
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MA, CALVIN

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ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* THOMAS S. NEAL, JOHN NORMAN,  
GUILLERMO ANDRES, and RAY GRADWOHL

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Appeal 2010-007388  
Application 10/800,281  
Technology Center 2600

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Before KALYAN K. DESHPANDE, JOHNNY A. KUMAR, and  
BRYAN F. MOORE, *Administrative Patent Judges*.

KUMAR, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 1-26, which are all of the claims pending in this application. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

## STATEMENT OF THE CASE

### *Introduction*

Appellants' invention relates to a lower enclosure of a keyboard that includes a region forming a cavity to stiffen the lower enclosure and a node support disposed in the cavity to support the node of a circuit in a switch-membrane assembly of the keyboard (*see* Abstract).

Claim 1, which is illustrative of the invention, reads as follows:

1. A keyboard enclosure for a keyboard comprising:

a first cavity in which a circuit can be disposed, the circuit including a first node and a second node both of which correspond to a key, wherein the circuit is operable to generate a signal when the key causes the first and second nodes to contact each other;

a region forming a second cavity in a lower enclosure for stiffening the lower enclosure and for providing a passage for one or more cables that electrically connect the keyboard to a processor; and

a node support located in the second cavity and operable to provide physical support for the second node of the circuit to ensure contact between the first and second nodes is maintained when the circuit disposed in the first cavity generates the signal

### *The Examiner's Rejections*

The Examiner has rejected claims 1-3, 6-15, 19-20, and 24-26 under 35 U.S.C. § 103(a), as being unpatentable over Wu (US 6,965,076 B2, Nov. 15, 2005) in view of Ma (US 5,615,081, May 25, 1997). Ans. 3-12.<sup>1</sup>

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<sup>1</sup> Throughout this opinion, we refer to the Briefs (Appeal Brief, filed Sep. 3, 2009, and the Reply Brief, filed Feb. 8, 2010) and the Answer (mailed Dec. 10, 2009) for the respective positions of Appellants and the Examiner.

The Examiner has rejected claims 16, 18, and 21-23 under 35 U.S.C. § 103(a) as being unpatentable over Wu and Ma, further in view of Ganthier (US 5,865,546, Feb. 2, 1999). Ans. 12-14.

The Examiner has rejected claims 4 and 5 under 35 U.S.C. § 103(a) as being unpatentable over Wu in view Ma, further in view Sheehan ([http://reviews.cnet.com/keyboards/apple-wireless-keyboard/4505-3134\\_7-30568482.html?tag=prod.img.1](http://reviews.cnet.com/keyboards/apple-wireless-keyboard/4505-3134_7-30568482.html?tag=prod.img.1) (last visited Dec. 17, 2007)). Ans. 14-15.

The Examiner has rejected claim 17 under 35 U.S.C. § 103(a) as being unpatentable over Wu in view of Ma, further in view of Anderson (US 6,587,094 B2, Jul. 1, 2003). Ans. 15-16.

### *Appellants' Contentions*

With respect to independent claims 1, 15, 19, 20, and 24, Appellants contend that the Examiner erred in rejecting the claims because neither Wu, Ma, nor Ganthier teach or suggest “a node support ... operable to provide physical support ... to ensure contact between the first and second nodes is maintained when the circuit ... generates the signal” (App. Br. 8-11; Reply Br. 1-5). Appellants specifically point to the teachings of Wu related to the keyboard assembly and assert that the “bottom holding plate” does not correspond to the “node support,” as recited in claims 1, 15, 19, 20, and 24. (App. Br. 8-9), because “a node support is not the equivalent of a flat metal plate” (Reply Br. 3).

With respect to the remaining claims, Appellants assert the patentability of claims 2-14, 16-18, 21-23, and 25-26 based on the same reasons asserted for claims 1, 15, 19, 20, and 24 (App. Br. 11-13).

*Issue on Appeal*

Has the Examiner erred in rejecting the claims as being obvious over the cited references because the references fail to teach or suggest a “node support” as recited in independent claims 1, 15, 19, 20, and 24?

ANALYSIS

We have reviewed the Examiner’s rejection in light of Appellants’ arguments that the Examiner has erred. We disagree with Appellants’ contentions and adopt as our own (1) the findings and reasons set forth by the Examiner in the action from which this appeal is taken and (2) the reasons set forth by the Examiner in the Examiner’s Answer in response to Appellants’ Appeal Brief (*see* Ans. 16-19). However, as outlined *infra*, we highlight and address specific findings and arguments for emphasis.

*35 U.S.C. § 103(a): claims 1-3, 6-15, 19-20 and 24-26*

As to Appellants’ above contention about “node support”, we specifically agree with the Examiner (Ans. 16-17), that the claimed “node support” merely requires the structure to provide physical support to the circuitry above so that the various nodes can allow the user of the keyboard to press down on the key and input a character based on the actuated key that the user pressed. Appellants’ Specification indicates that “each node support may be located anywhere in the cavity 58 to correspond to a respective circuit node 56 (FIG. 2) that is located above the cavity. Furthermore, each node support 54 may be shaped as desired to support the circuit node 56” (Spec. ¶18). Thus, according to Appellants’ Specification, the node support can be “located anywhere in the cavity” and “shaped as

desired.” Although this disclosure is not limiting to the claimed invention, it provides context for which the term “node support” is interpreted. Based on our review of Wu (Fig. 2d, col. 5, ll. 27-55), we find that the Examiner, giving the claim its broadest reasonable interpretation consistent with the Specification, *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997), has properly equated Wu’s bottom holding plate, that has a flat shape, as the claimed node support. In other words, the claimed node support does not preclude a flat-shaped metal plate as argued (Reply Br. 2) by the Appellants. Furthermore, Appellants’ contention that the node support is “projecting up from the lower enclosure of the keyboard” (*id.*) is not commensurate in scope with independent claims 1, 15, 19, 20, and 24.

We are also not persuaded by Appellants’ assertion that in claim 15 the “node support is a structure that prevents the membrane from flexing” (App. Br. 10). It is unpersuasive because it is not commensurate with the scope of claim 15, which does not recite that the node support prevents the membrane from flexing.

Appellants have not separately argued the dependent claims 2, 3, 6-14, and 25-26 and thus, these claims fall with their respective independent claims.

*35 U.S.C. § 103(a): claims 16, 18, 21-23*

Appellants argue (App. Br. 11-12) the patentability of claims 16, 18, and 21-23 based on the same reasons presented for claims 15 and 20, respectively, which were found to be unpersuasive. Therefore, for the reasons set forth above, we concur with the Examiner’s conclusion that Wu, Ma, and Ganthier would have suggested all the limitations of claims 16, 18,

and 21-23 to one of ordinary skill in the art and sustain the Examiner's rejection of claims 16, 18, and 21-23.

*35 U.S.C. § 103(a): claims 4-5*

Appellants assert their invention is not obvious over Wu, Ma, and Sheehan because Sheehan does not cure the deficiencies of Wu and Ma (App. Br. 12-13). As set forth above, Appellants have not persuaded us the Examiner erred. Accordingly, the Examiner did not err in finding the combination of Wu, Ma, and Sheehan teaches or suggests the invention as recited in claims 4 and 5. Therefore, the Examiner did not err in rejecting claims 4 and 5 under 35 U.S.C. § 103(a) for obviousness over Wu, Ma, and Sheehan.

*35 U.S.C. § 103(a): claim 17*

Appellants assert their invention is not obvious over Wu, Ma, and Anderson because Anderson does not cure the deficiencies of Wu and Ma (App. Br. 13). As set forth above, Appellants have not persuaded us the Examiner erred. Accordingly, the Examiner did not err in finding the combination of Wu, Ma, and Anderson teaches or suggests the invention as recited in claim 17. Therefore, the Examiner did not err in rejecting claim 17 under 35 U.S.C. § 103(a) for obviousness over Wu, Ma, and Anderson.

## CONCLUSIONS

The Examiner's rejection of claims 1-3, 6-15, 19-20, and 24-26 under 35 U.S.C. § 103(a) as being unpatentable over Wu and Ma is affirmed.

The Examiner's rejection of claims 16, 18, and 21-23 under 35 U.S.C. § 103(a) as being unpatentable over Wu, Ma, and Ganthier is affirmed.

The Examiner's rejection of claims 4 and 5 under 35 U.S.C. § 103(a) as being unpatentable over Wu, Ma, and Sheehan is affirmed.

The Examiner's rejection of claim 17 under 35 U.S.C. § 103(a) as being unpatentable over Wu, Ma, and Anderson is affirmed.

#### DECISION

The decision of the Examiner rejecting claims 1-26 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

msc